



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF LAW, BUSINESS INTELLIGENCE AND ECONOMICS

DEPARTMENT OF ECONOMICS, MARKETING AND ENTREPRENEURSHIP

EXAMINATION PAPER

COURSE CODE : CBM 223
COURSE TITLE : BUSINESS FINANCE
SPECIAL REQUIREMENTS : **Non-programmable calculator**
DURATION : 3 Hours
LEVEL : 1.1
DATE : **09 OCT 2023**

INSTRUCTIONS TO CANDIDATES:

1. No cell phones are allowed in the examination venue
2. Use of silent, non-programmable calculators is allowed
3. Answer **Any Four (4)** questions.
4. Begin each question on a new page.
5. The number of marks for each question or part question is shown in brackets []

QUESTION 1

a) ZEGU has two projects that it is undertaking at its Harare campus. Analyse the following information and answer the questions that follow.

State of the economy	Probability	Project A return	Project B return
Strong	0.2	700	550
Normal	0.5	400	400
Weak	0.3	200	300

Required

- i). Calculate the expected returns of projects A and B. **[4 marks]**
 - ii). Calculate the variance and the standard deviation of A and B. **[8 marks]**
 - ii). Draw a short conclusion about the two projects based on expected returns, variance and standard deviation. **[3 marks]**
- b) Identify and explain three types of attitudes towards risk. **[10 marks]**

QUESTION 2

- a) Explain with aid of examples the key roles undertaken by the finance manager in a business organisations. **[10 marks]**
- b) Mwendamberi Limited seeks to dominate the transport sector and they have invested US\$ 100 000 at an annual interest rate 8% in an expansion project. Calculate the value of the investment after 5 years. **[5 marks]**
- c) Highlanders FC have made a US\$1 000 000 investment today at 8 percent annual interest compounded semi-annually for 5 years. Calculate the future value of the investment. **[5 marks]**
- d) Dynamos FC has been trying to buy Lionel Messi from Barcelona for a record fee of US\$15 billion. Dynamos FC approached Chimbado Bank of Zimbabwe seeking a loan and were given two options. The first option is a US\$15 billion loan at 8% annual interest compounded quarterly.

The second option is US\$ 15 billion at 6% annual interest compounded monthly. Calculate the effective annual rate for the interest rates given in the two options. Appraise on the option which Dynamos FC should take. **[5 marks]**

QUESTION 3

a) A project has an initial investment of US\$11 300 and the expected cash flows are as follows

Year 1: US\$ 2 050; Year 2: US\$ 3 111; Year 3: US\$ 4 020 and Year 4: US\$ 2 913.

i) Calculate the Net present value of the project and comment whether the project should be undertaken. **[5 marks]**

ii) Calculate the profitability index of the project and comment on it. **[5 marks]**

iii) Calculate the payback period of the project. **[5 marks]**

b) Capital rationing is a strategy used by companies or investors to limit the number of projects they take on at a time. Discuss the concept of capital rationing with aid of examples. **[10 marks]**

QUESTION 4

a) XYZ has enjoyed improved performance in 2022 and this has been witnessed by recent developments on the stock exchange. The Price earnings ratio increased to 12 whilst at the end of trading in 2022, earning per share were \$6.09 and the share price was US\$ 13.71. Calculate the cost of equity. **[4 marks]**

b) A firm's cost of equity is 17.13% and the shareholders of the organisation face an average tax of 23%. The shareholders also anticipate that approximately 4.1% brokerage cost will be incurred while investing their dividends in alternative securities. Compute the cost of retained earnings. **[4 marks]**

c) A company issued a 12% bond at par for US\$200 000 with a tax rate of 30%.

i) Compute the after-tax cost of bond. **[5 marks]**

ii) Compute the after-tax cost of bond if the issuance fees are at 5% and tax rate remains at 30%. **[5 marks]**

d) Explain two reason why inventory management is important to an organisation. [7 marks]

QUESTION 5

Write short notes on following terms with aid of examples and diagrams

a) Systematic risk. [5 marks]

b) Efficient frontier. [5 marks]

c) Capital market line [5 marks]

d) Co-variance [5 marks]

e) Diversification [5 marks]

THE END

FORMULAS

$$FV_n = PV * (1 + r)^n$$

$$r = \left(\frac{FV}{PV}\right)^{1/n} - 1$$

$$PV_0 = \frac{FV}{(1+r)^n}$$

$$PV \text{ Perp} = \frac{C}{r}$$

$$PV \text{ ann d} = (1 + r) * PV \text{ of annuity}$$

$$r = \frac{QR}{m}$$

$$PBP = \frac{IO}{CF}$$

$$AAR = \frac{Av \text{ Inc}}{Av \text{ Inv}} * 100$$

$$PI = \frac{PV \text{ of CFs}}{IO}$$

$$K_e = \frac{D}{MP}$$

$$K_p = \frac{D}{NP}$$

$$FV_n - PV = (1 + r)^n$$

$$PV_0 = \frac{FV}{(1+r)^n}$$

$$PV \text{ ann} = \frac{C}{r} * (1 - (1 + r)^{-n})$$

$$FV \text{ ann} = \frac{C}{r} * ((1 + r)^n - 1)$$

$$FV \text{ ann d} = (1 + r) * FV \text{ of annuity}$$

$$EAR = 1 + \left(\frac{QR}{m}\right)^m - 1$$

$$\text{Payback period} = Y + \frac{B}{C}$$

$$NPV = \sum \frac{CF_n}{(1+r)^n} - IO$$

$$IRR = A + B * \frac{C}{D}$$

$$K_e = \frac{D}{MP} + g$$

$$NP = \text{Issue Price} - \text{Floatation price}$$

$$K_e = \frac{EPS}{MP_e}$$

$$K_e = R_f + (R_m - R_f) * \beta$$

$$K_e = R_f + \beta_1 * RP_1 + \dots + \beta_n * RP_n + \mu$$

$$K_d = \frac{1}{NP} * (1 - t)$$

$$NP = \text{Amnt of D} - \text{D Acq fees} + \text{Prem} - \text{Disc} \quad K_r = K_e * (1 - t) * (1 - b)$$

$$K_o = \sum W_i K_i$$

$$E(r) = \sum (\text{Prob} * \text{Return})$$

$$\delta^2 = \sum \text{Prob} * (R - E(r))^2$$

$$CV = \frac{\delta}{x}$$

$$CV = \frac{1}{n} * \sum (R_x - E(R_x)) (R_y - E(R_y))$$

$$CV = \sum P_i (R_x - E(R_x)) (R_y - E(R_y))$$

$$r_{xy} = \frac{\text{Covariance}_{xy}}{\delta_x \delta_y}$$

$$\delta_{AB}^2 = W_A^2 \delta_A^2 + W_B^2 \delta_B^2 + 2W_A W_B \text{Cov}_{AB}$$

$$\text{CML}(R_p) = R_f + \frac{E(R_m - R_f)}{\delta_m} * \delta_p$$

$$\delta_p = \delta_m * W_m$$

$$E(R_i) = R_f + \beta (R_m - R_f)$$

$$RP = (R_m - R_f)$$

$$TA = TL + E$$

$$NCA + CA = NCL + CL + E$$

$$NWC = CA - CL$$

Total CF = CF from operating activities + CF from investing activities
+ CF from financing activities

$$\text{Current ratio} = \frac{CA}{CL}$$

$$\text{Acid/quick test ratio} = \frac{CA - \text{Inv}}{CL}$$

$$\text{Cash ratio} = \frac{CA + CE}{CL}$$

$$\text{Total debt ratio} = \frac{TA - TE}{TA}$$

$$\text{Debt-equity ratio} = \frac{TD}{TE}$$

$$\text{Equity multiplier} = \frac{TA}{TE}$$

$$\text{Interest cover ratio} = \frac{EBIT}{Int}$$

$$\text{Inventory turnover} = \frac{COGS}{Inv}$$

$$\text{Days' sales in inventory} = \frac{365 \text{ days}}{Inv T/O}$$

$$\text{Receivables turnover} = \frac{S}{TR}$$

$$\text{Receivables turnover} = \frac{S}{TA}$$

$$\text{Profit margin} = \frac{NI}{S}$$

$$ROA = \frac{NI}{TA}$$

$$ROE = \frac{NI}{TE}$$

$$EPS = \frac{E}{\text{Ordinary shares in issue}}$$

$$P/E \text{ ratio} = \frac{\text{price per share}}{EPS}$$

$$BEP = \frac{FC}{Cont}$$

$$Cont = SP - VC$$

12/5
0/4 pm